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REMARKS/ARGUMENTS

Claims 1 to 4 and 7 to 39 are now before the Examiner.

Claim 1 has been amended. Support for this amendment is found at page 6, lines 1 to 8 of the description.

Claim 33 has been amended to revert back to a dependent claim.

Claim 35 has been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims. Claim 35 has been amended to include the limitations of claims 1 and 33 but not claim 34. In addition, claim 35 has been amended to provide proper antecedents and to refer to "at least one adhesive surface" rather than "adhesive surfaces", as supported at page 7, lines 9 to 19 of the description.

Claims 37 to 39 have been added. The subject matter of these claims is supported at page 6, lines 6 to 8, page 8, lines 17 to 30, and page 9, lines 4 to 13 of the description.

The Examiner's remarks in the Office Action are addressed below.

Rejections Under 35 U.S.C. 112

The Examiner has rejected Claims 1, 7 and 23 to 28 under 35 U.S.C. 112, second paragraph, as being indefinite, on the grounds that claim 1 recites that the pellets are arranged in an array, whereas claim 24 recites that the pellets are arranged in an array of predetermined arrangement. The Examiner asserts that it is unclear what is meant by the term "arranged", if it is not arranged in "some predetermined arrangement". At page 8, lines 3 to 5 of the description, it is described that "the pellets can be dumped into a tube and simply by their random stacking develop spaces amongst the pellets ready to receive the binder". Therefore, in this particular case, for example, there is no "predetermined arrangement".

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Rejection Under 35 U.S.C. 103

The Examiner has rejected claims 1 to 4, 7 to 20 and 22 to 34 under 35 U.S.C. 103(a) as being unpatentable over Glass (U.S. Patent No. 3,811,380) in view of Schöyer *et al.* (U.S. Patent No. 4,950,341).

The Examiner asserts that Glass discloses a plurality of pellets of explosive that is imbedded in a matrix (Figure 10 and column 4, lines 20 to 25). The Examiner further asserts that the matrix may be a rubber material or epoxy resin and that the resin is cast into segments in a mold with the pellets molded within the mold. The Examiner also asserts that the resin is in liquid form when it is poured into the mold (column 8, lines 3 to 12) and that the mold functions to hold the pellets in place while the binder is poured over top. In addition, the Examiner acknowledges that the particular fuel, oxidizer and binder are not disclosed.

The Examiner concludes that one having ordinary skill in the art would use the fuel, oxidizer and binders as taught by Schöyer *et al.* since Glass suggests that any fuels, oxidizers and binders can be used.

Figure 10 and the description at column 4, lines 20 to 25 of Glass is directed to a propellant arrangement having a plurality of pellets of explosive that are imbedded in a matrix. Each pellet has in its center a nucleus which detonates. The arrangement, as shown in Figure 11 and described at column 4, lines 39 to 56, is directed to pellets that have a burn rate that is very much higher than the overall average burning rate of the propellant. The burning of the propellant is described as a "controlled intermittent firing of individual pellets of explosive" and each firing of each pellet is quite violent. In contrast, the claimed invention is directed to an oxidizer package for use in solid fuel propellant system, wherein the pellets of solid oxidizer and the binder each have a complimentary burn rate whereby the burn rate of the pellets is such that the pellets are not consumed substantially faster than the binder and *vice versa*. This is achieved, for example, using certain materials for the pellets and binder, certain dimensions of pellets and/or thickness of binder. Glass teaches away from the claimed invention since Glass teaches that the burn rate of the pellet must be very much higher than the overall average burning rate of the propellant such that "controlled intermittent firing of individual pellets of explosive" is

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achieved and therefore, consumption of the pellets is much faster than the consumption of the propellant. If one skilled in the art were to combine the teachings of Glass and Schöyer *et al.*, the teachings of Glass would ensure that the fuel, oxidizer and binder chosen must provide a pellet that has a burn rate and consumption rate that is in complete contrast to the claimed invention. Therefore, the cited references do not teach or suggest, either singly or in combination, the claimed invention.

The Examiner has also rejected claims 1 to 4, 7 to 20, 22, and 29 to 34 under 35 U.S.C. 103(a) as being unpatentable over Hunter *et al.* (U.S. Patent No. 3,522,334) in view of Schöyer *et al.* (U.S. Patent No. 4,950,341).

The Examiner asserts that Hunter *et al.* discloses an oxidizer pellet that is coated with aluminum and then a wax coating (Column 3, lines 60 to 75). The Examiner further asserts that the pellets can be compounded by mixing and then shaped by molding into any suitable grain design (Column 5, lines 45 to 55). The Examiner also asserts that the finished propellant is a solid and thus, the binder acts to hold the pellets together. The Examiner asserts that the mold functions to hold the pellets in place while the binder is poured over top. In addition, the Examiner acknowledges that the particular fuel, oxidizer and binder are not disclosed.

The Examiner concludes that one having ordinary skill in the art would use the fuel, oxidizer and binders as taught by Schöyer *et al.* since Hunter *et al.* suggests that any fuels, oxidizers and binders can be used.

Hunter *et al.* does not teach or suggest a solid oxidizer in the form of discrete pellets, wherein the pellets are arranged in an array with spaces amongst the pellets filled with a binder. As described at Column 5, lines 46 to 56, the coated perchlorate pellets are "compounded with other propellant ingredients by admixture therewith", which are then extruded, casted, or molded into a suitable grain design. Therefore, the pellets are simply mixed with "propellant ingredients" and that combination is, for example, molded. The pellets of Hunter *et al.* are not arranged in an array with spaces amongst the pellets filled with a binder. Moreover, Hunter *et al.* does not teach or suggest pellets arranged in an array with spaces amongst the pellets filled with binder, wherin the pellets of solid oxidizer and the binder each have a complimentary burn rate,

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whereby the burn rate of the pellets is such that the pellets are not consumed substantially faster than the binder and *vice versa*.

For these reasons, Hunter *et al.* does not teach or suggest the claimed invention. Schöyer *et al.* is applied merely for reciting certain fuel, oxidizer and binders. Schöyer *et al.* does not overcome the described deficiencies of Hunter *et al.* Accordingly, Hunter *et al.*, in combination with Schöyer *et al.*, does not teach or suggest the claimed invention.

For the reasons noted, the invention as defined in claim 1 and the claims dependent therefrom patentably distinguish over the cited references. Applicants respectfully request withdrawal of the rejection of the present claims. Applicants respectfully request reconsideration of this application and timely allowance of all of the pending claims.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



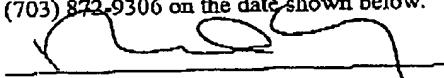
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CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being facsimile transmitted to the U. S. Patent and Trademark Office at Fax No. (703) 872-9306 on the date shown below.



January 28, 2005

Raymond O. Linker, Jr.

Date